

**ACTIVE/PASSIVE MONOLITHICALLY INTEGRATED
CHANNEL FILTERING POLARIZATION SPLITTER**

ABSTRACT OF THE DISCLOSURE

5 An InP on-chip polarization splitter is proposed base on an arrayed
waveguide grating that is composed of waveguides having birefringence. The
present invention also performs channel filtering and demultiplexing that is
useful in WDM/DWDM applications. The required waveguide structure is
formed using active-passive monolithic integration platforms, providing the
10 integration of the polarization splitter with active devices as well as passive
devices.